Stamford Waste-To-Energy Project

Innovative Technology to Reduce Waste Transport & Disposal, and Create Renewable Electric Power at Stamford Wastewater Treatment Plant

The City of Stamford and its Water Pollution Control Authority (WPCA) -has completed a major upgrade to the Stamford Wastewater Treatment Plant. Stamford has launched the first phase of a project - establishing an ***innovative, low-emissions, waste-to-energy electric generation facility that will turn dry, pelletized sewage sludge into up five to ten -megawatts of electric power*** in a region facing major electricity shortages and electric grid congestion. Stamford is pleased to announce the Connecticut Congressional delegation, led by Representative Chris Shays, Senator Christopher Dodd, and Senator Joe Lieberman, has now obtained $2 million in funding for this Waste-to-Energy project, including $1.5 million in Department of Energy biomass funding, and $500,000 in EPA "State and Tribal Assistance Grant" funding (including $250,000 in FY05 funding). This federal funding will help Stamford launch the Waste-to-Energy project and be a state and national leader in innovative energy conservation and renewable energy projects.

BACKGROUND

The residuals generated by the wastewater treatment process are organic substances that, when treated properly, have a high heating value (6000 to 9000 BTU/lb) and can be used as a fuel source. ***Stamford will use drying and pelletizing technology, the state-of-art residuals handling process for wastewater treatment plants.*** Typically, these dried pellets (or wastewater sludge, if not pelletized) are transported long distances from the community and applied to land as a fertilizer.

Stamford seeks to turn this waste into a renewable energy source. Recent regulatory changes in the electric power generation industry, incentives for the use of renewable fuel sources, electric power transmission and other "electric load pocket" limitations in southwest Connecticut, and the co-location of the electric generation with a major power consumer – the sewer plant – make this waste-to-energy project a key opportunity. Stamford plans to dry the waste residuals, produce pellets that can be stored to allow leveling of fuel supply, and then use the dried pellets as a fuel to generate electric power that can be used on site and/or sold to the power grid. All of the equipment that will be used for this project is "industry standard" and no new equipment will have to be developed. However, this waste-to-energy application is an innovative, first-in-the-nation approach that could be transferred to other communities.

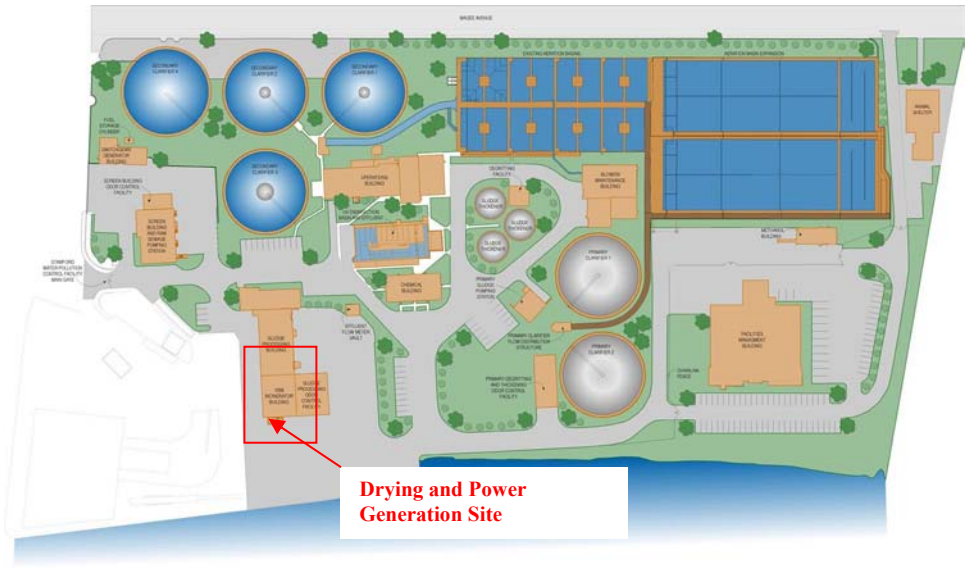
This project will address an emerging crisis in Connecticut – electric reliability and electric price instability in this constrained electricity load pocket area. Stamford's waste-to-energy facility will produce 5-10 megawatts of badly-needed energy generation in Connecticut. One MW will supply the entire electric demand (0.8 MW) of the Stamford Wastewater Treatment Plant. Ten MW could supply other critical urban resources in Stamford including hospitals, police and first responder facilities, communications facilities, and other municipal electric customers that must have reliable, economic sources of power. The facility's electric generation will also remove pressure on the congested electric system of this Connecticut region. Moreover, the waste-to-energy facility can provide emergency back-up power in blackout situations, and avoid the potential discharge of massive amounts of untreated effluent to waterbodies in times when the electric grid is down.

PROGRESS ON THE STAMFORD PROJECT

Stamford is already making major progress on this project:

- **Building on a Successful Treatment Plant Upgrade** – Stamford has completed its recent $105 million treatment plant upgrade -- and is ready for the next, waste-to-energy phase;
- **A Ready-to-Go Project** – On December 1 2005, Stamford - awarded a contract for Phase 1 (the design-build-operation of the pelletizing and energy generation facility), and then be ready to proceed with design;
- **Community Support** – Stamford has gathered substantial support from community and state stakeholders for the waste-to-energy project; and
- **Funding Already Leveraged** – The City of Stamford has budgeted up to $15 million in bonding authority in its capital budget for the waste-to-energy facility.

The preliminary capital cost estimates for this waste-to-energy facility is between $20-30 million. Stamford's analysis of the total capital and operation and maintenance costs, coupled with credits for renewable energy, use of generated energy onsite, and reduced cost in transport of residuals to landfill and disposal-tipping fee, show a positive financial value for the project. The federal funding grants will help catalyze this innovation and bring major benefits to the community and region.



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